UNITED STATES PATENT AND TRADEMARK OFFICE

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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 November 2008*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 7-22* is/are pending in the application.

　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 7-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　a)☐ All　b)☐ Some *　c)☐ None of:

　　1.☐ Certified copies of the priority documents have been received.

　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed on 11/26/2008 have been fully considered but they

are not persuasive.

a.   In the remarks, the Applicant argues that combination of Cain and Hulyalkar fails

to disclose the claimed limitations;

["a route management module configured to combine the congestion metric information
generated by the plurality of transceiver nodes into a congestion report; the route management
module configured to combine routing information for each transceiver node and the congestion
report into a plurality of node routing and congestion reports, the route management module is
configured to transmit one of the plurality of node routing and congestion reports to each
transceiver node based on the routing information", the data cell includes "routing information"
and "wherein the congestion metric information is base on comparing cell counts against a total
capacity of each link, a monitoring signal of a processor buffer availability, and a monitoring of
signal of priority queues capacity"] (see claim 1).

The Examiner, however respectfully disagrees with such an assertion since the

Examiner must give each presented claimed limitation, its broadest reasonable

interpretation in light of the Applicant's specification. The Examiner also notices that

there is very little description in the claimed limitations which empirically narrows the

manner in which the Examiner must interpret such claimed limitations.

In contrast to Applicant's assertion, Hulyalkar is understood to teach mobile

wireless terminal/station and each station maintains local database of results of quality

assessment for each path to each other station; the organization of network quality

assessment measurement as a matrix; the matrix including transmitting stations and

receiving stations identifiers and reported quality assessment (see Pars. [0009-10,

0026-30 and 00337-38]; whereby the reported quality assessment is being associated

with the "congestion report"; and the transmitting and receiving stations identifiers are

being associated with the "routing information"). Hulyalkar also mentions the a network

expands as a person enter or activates his or her communication device; and the

network contracts as people leave or sign off the network; management of

transmission/traffic flow requests from stations and on demand, controller must allocate

sufficient time slot to satisfy granted bandwidth allocation QoS (see Pars. [0017-21];

whereby the expansion and contraction of the network due to its usage is being

associated with the "cell counts against a total capacity of each link").

The teachings of Hulyalkar, as shown above, meets the argued features in claim

1, therefore the combination of Cain and Hulyalkar teaches the claimed limitations in

claim 1.

b.　　Regarding claims 8 and 16, the Applicant argues that the combination of Cain

and Hulyalkar fails to teach:

["generating congestion metric information based on the link utilization; combining the
congestion metric information with routing information; transmitting the congestion metric
information and routing information"].

In contrast to Applicant's assertion, Hulyalkar is understood to teach mobile

wireless terminal/station and each station maintains local database of results of quality

assessment for each path to each other station; the organization of network quality

assessment measurement as a matrix; the matrix including transmitting stations and

receiving stations identifiers and reported quality assessment (see Pars. [0009-10,

0026-30 and 00337-38]; whereby the reported quality assessment is being associated

with the "congestion report"; and the transmitting and receiving stations identifiers are being associated with the "routing information").

The teachings of Hulyalkar, as shown above, meets the argued features in claims 8 and 16, therefore the combination of Cain and Hulyalkar teaches the claimed limitations in claims 8 and 16.

Claims 2-3, 7, 9-15 and 17-22 are rejected by virtue of their dependency of claims 1, 8 and 16.

Therefore, the Office Action is being maintained and made Final as shown below.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3 and 8-22 are rejected under U.S.C. 103(a) as being unpatentable over Cain et al. (U.S 20030198206 A1), (hereafter, Cain) in view of Hulyalkar (U.S 20020085503 A1), (hereinafter, Hulyalkar).

Regarding claims 1, 8 and 16, Cain discloses a communications system/ method/ transceiver (see Fig. 1), comprising:

a plurality of transceiver nodes (mobile nodes 12a-12h, see Fig. 1) configured to

utilize a time division multiple access structure (TDMA access scheme, see Par. 0004)

to communicate between the plurality of transceiver nodes (12a-12h), each transceiver

node generating congestion metric information based on the utilization of a link to each

of its neighbors (= interference detection unit 18d detects interference in time slot for

communication with neighboring mobile nodes, see Pars. [0029-30 and 0038-42]);

the time division multiple access structure including a plurality of time slots during

which the plurality of transceiver nodes are configured to communicate data cells

(= traffic coordination unit 18e coordinates communication with each neighboring mobile

node by allocating time slots; time slot for transmission and receiving data; and RF

signal, see Pars. [0030-31, 0054 and 0092]), the data cells being transmitted from a

transmission queue (= queue buildup/queue state, see Pars. 0026-28, 0079 and 0139-

44), the data cells including the congestion (interference/packet error rate) metric

information (see Pars. [0028, 0042 and 0077]).

Cain fails to mention "a route management module configured to combine the

congestion metric information generated by the plurality of transceiver nodes into a

congestion report; the route management module configured to combine routing

information for each transceiver node and the congestion report into a plurality of node

routing and congestion reports, the route management module is configured to transmit

one of the plurality of node routing and congestion reports to each transceiver node

based on the routing information"; the data cell includes "routing information" and

"wherein the congestion metric information is base on comparing cell counts against a

total capacity of each link, a monitoring signal of a processor buffer availability, and a

monitoring of signal of priority queues capacity".

However, Hulyalkar, which is an analogous art, teaches <u>a route management</u>

<u>module configured to combine the congestion metric information generated by the</u>

<u>plurality of transceiver nodes into a congestion report; the route management module</u>

<u>configured to combine routing information for each transceiver node and the congestion</u>

<u>report into a plurality of node routing and congestion reports</u> <u>the route management</u>

<u>module is configured to transmit one of the plurality of node routing and congestion</u>

<u>reports to each transceiver node based on the routing information</u>"; the data cell

includes "routing information" (= each station maintains local database of results of

quality assessment for each path to each other station; the organization of network

quality assessment measurement as a matrix; and the matrix includes transmitting

stations and receiving stations identifiers and the reported quality assessment, see

Pars. [0009-10, 0026-30 and 00337-38]; whereby the reported quality assessment is

being associated with the "congestion report"; and the transmitting and receiving

stations identifiers are being associated with the "routing information"); and "wherein the

congestion metric information is base on comparing cell counts against a total capacity

of each link, a monitoring signal of a processor buffer availability, and a monitoring of

signal of priority queues capacity" (= network expands as a person enter or activates his

or her communication device; and the network contracts as people leave or sign off the

network; management of transmission/traffic flow requests from stations and on

demand, controller must allocate sufficient time slot to satisfy granted bandwidth

allocation QoS; see Pars. [0017-21]; whereby the expansion and contraction of the network due to its usage is being associated with the "cell counts against a total capacity of each link").

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Hulyalkar with the system of Cain for the benefit of achieving a system where matrix of quality assessments can be utilized to identify problematic terminal-to-terminal links; and to institute retransmission relay paths to overcome poor quality link (see Hulyalkar; Pars. [0009-10]).

Regarding claims 2 and 14, as recited in claims 1 and 8, Cain further discloses the communication system/method, wherein the congestion metric information is generated by a channel access subsystem (see Pars. [0033-37 and 0040-42]).

Regarding claim 3, as recited in claim 1, Cain further discloses the communication system/method, wherein the cell counts are transmitted in unicast and broadcast allocated slots (see Pars. [0047, 0054, and 0058-59]).

Regarding **claims 9 and 17**, as recited in claims 8 and 16, Cain further discloses the communication system/transceiver, wherein the congestion metric information is provided as one of a predetermined number of states (see Pars. 0083 and 0089-90).

Regarding **claims 10 and 18**, as recited in claims 9 and 17, Cain further discloses the

method/transceiver, wherein the predetermined number of states is four (4) (see Pars.

[0083 and 0089-90]).

Regarding claim 11 and 19, as recited in claims 8 and 16, Cain fails to disclose the

method/transceiver, wherein a route management subsystem disseminates the

congestion metric information.

However, Hulyalkar teaches the communication system/transceiver, wherein a

route management subsystem disseminates the congestion metric information

(see Pars. [0019-21 and 0029]).

It would therefore have been obvious to one of the ordinary skill in the art to

combine the teaching of Hulyalkar with the system of Cain for the benefit of achieving a

system where matrix of quality assessments can be utilized to identify problematic

terminal-to-terminal links; and to institute retransmission relay paths to overcome poor

quality link (see Hulyalkar; Pars. [0009-10]).

Regarding **claim 12 and 20**, as recited in claims 8 and 16, Cain fails to disclose the

method/transceiver, wherein a route management subsystem, wherein a flow control

subsystem of a second <u>transceiver</u> node may utilize the congestion metric information

when received by the second <u>transceiver</u> node.

However, Hulyalkar teaches wherein a route management subsystem, wherein a flow control subsystem of a second node may utilize the congestion metric information when received by the second node (see Pars. [0019-21, 0029 and 0036-37]).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Hulyalkar with the system of Cain for the benefit of achieving a system where matrix of quality assessments can be utilized to identify problematic terminal-to-terminal links; and to institute retransmission relay paths to overcome poor quality link (see Hulyalkar; Pars. [0009-10]).

Regarding claim 13 and 21, as recited in claims 8 and 16, Cain fails to disclose the method/transceiver, wherein a route management subsystem, wherein the congestion metric information and routing information is transmitted by a route management subsystem.

However, Hulyalkar teaches wherein a route management subsystem, wherein the congestion metric information and routing information is transmitted by a route management subsystem (see Pars. [0019-21, 0029 and 0036-37]).

It would therefore have been obvious to one of the ordinary skill in the art to combine the teaching of Hulyalkar with the system of Cain for the benefit of achieving a system where matrix of quality assessments can be utilized to identify problematic terminal-to-terminal links; and to institute retransmission relay paths to overcome poor quality link (see Hulyalkar; Pars. [0009-10]).

Regarding claims 15 and 22, as recited in claims 8 and 16, Cain further discloses the

method/transceiver, wherein the transmission system is a time division multiple access

system (see Pars. [Pars. [0004 and 0010]).

3.   **Claim 7 is rejected under U.S.C. 103(a) as being unpatentable over**

Cain et al. (U.S 20030198206 A1), (hereafter, Cain) in view of Hulyalkar and further

in view of Billhartz (US. 20040203820), (hereinafter, Billhartz).

Regarding claim 7, as recited in claim 1, the combination of Cain and Hulyalkar fails to

disclose the communication system wherein the congestion metric information is based

on the availability of unallocated slots.

However, Billhartz, which is an analogous art, teaches system wherein the

congestion metric information is based on the availability of unallocated slots (see Par.

[0070]).

It would therefore have been obvious to one of the ordinary skill in the art to

combine the teaching of Billhartz with the system of Cain and Hulyalkar for the benefit of

achieving an ad hoc system that shares connectivity data (see Billhartz, Par. [0011]).

CONCLUSION

Examiner's Note: Examiner has cited particular columns and line numbers in the

references applied to the claims above for the convenience of the applicant. Although

the specified citations are representative of the teachings of the art and are applied to

specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. SEE MPEP 2141.02 [R-5]   VI. PRIOR ART MUST BE CONSIDERED IN ITS ENTIRETY, INCLUDING DISCLOSURES THAT TEACH AWAY FROM THE CLAIMS: A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004). >See also MPEP §2123.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of 33the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwasi Karikari whose telephone number is 571-272-8566. The examiner can normally be reached on M-T (9am - 7pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8566. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kwasi Karikari/
Patent Examiner: Art Unit 2617.

/Charles N. Appiah/
Supervisory Patent Examiner, Art Unit 2617